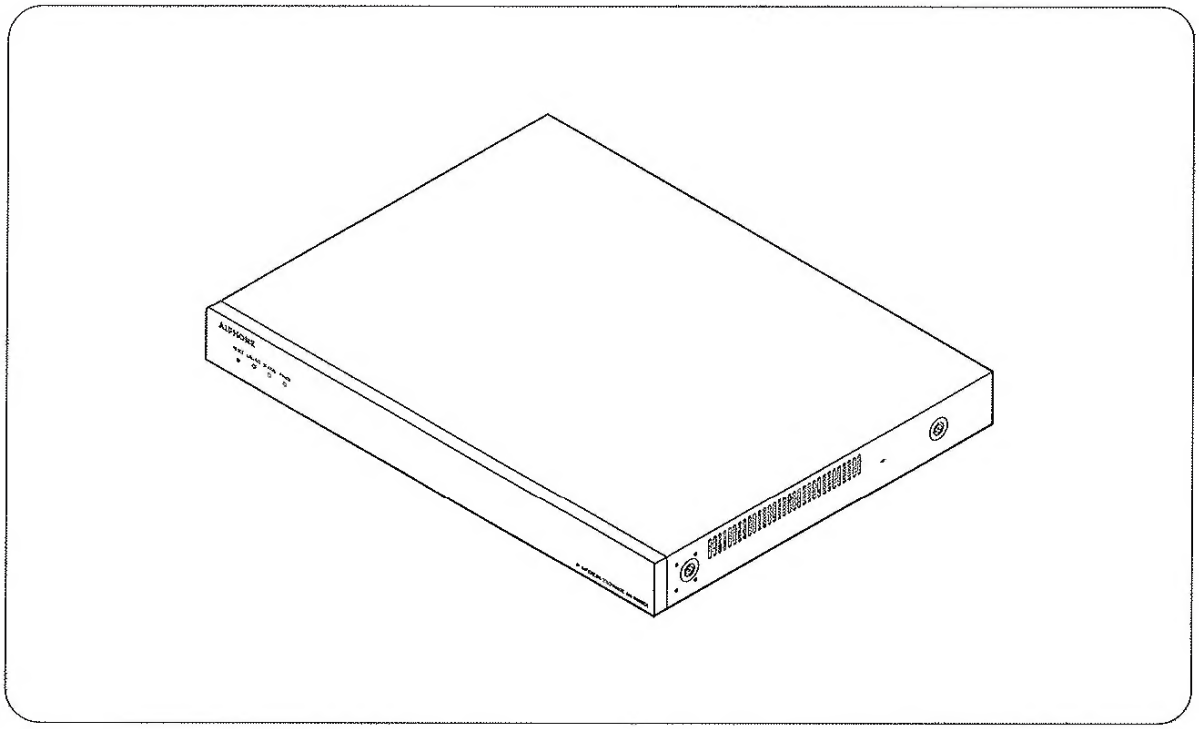
AIPHONE®

INSTALLATION MANUAL

IP INTERCOM EXCHANGE AN-8000EX



Thank you for purchasing AIPHONE's IP Intercom Exchange.
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

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1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.

⚠ WARNING	Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

⚠ WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest AIPHONE sales office. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - If you detect smoke or a strange smell coming from the unit
  - If water or any metallic object gets into the unit
  - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
  - If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest AIPHONE sales office.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.
- Do not touch a plug during thunder and lightning, as this may result in electric shock.

⚠ CAUTION

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- Do not block the fan exhaust vent on the unit's rear. Doing so may cause heat to build up inside the unit and result in fire.

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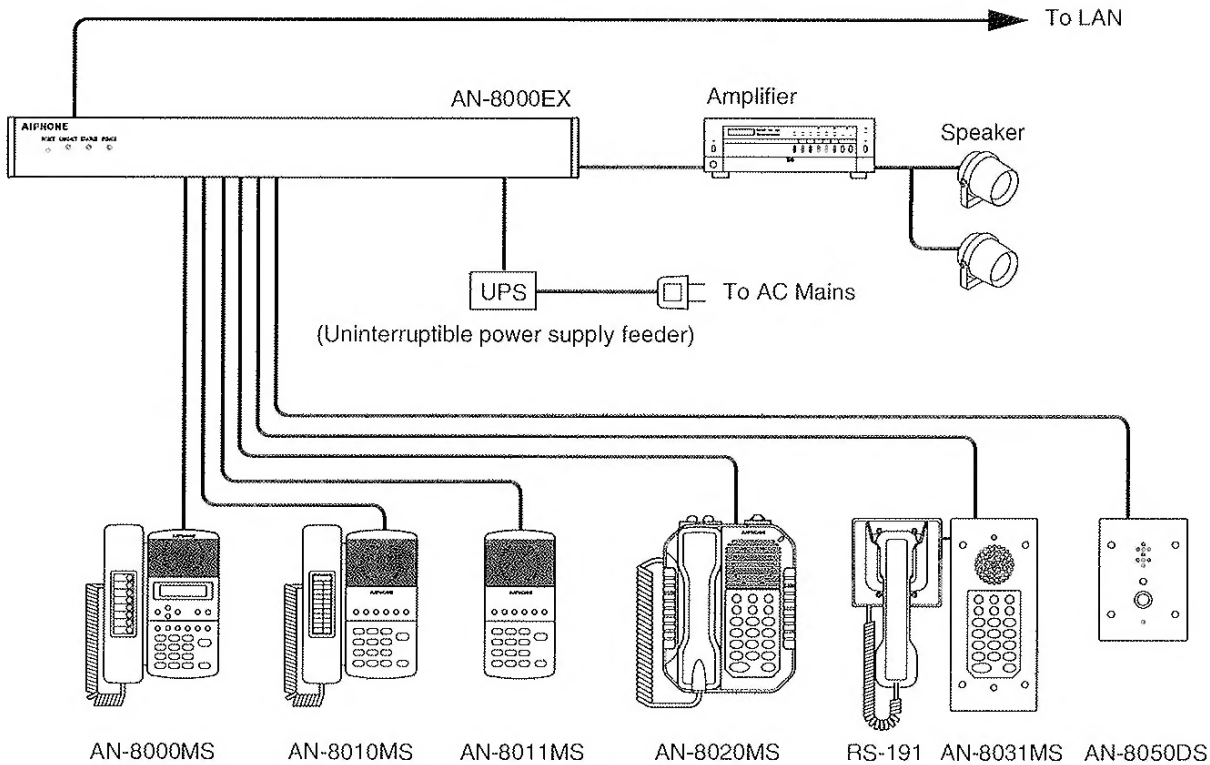
5. SYSTEM CONFIGURATION EXAMPLE



[Exchange]

AN-8000EX: IP Intercom Exchange

[Stations]

AN-8000MS: Multifunctional Master Station
AN-8010MS: Standard Master Station
AN-8011MS: Standard Hands-Free Master Station
AN-8020MS: Industrial-Use Master Station
AN-8031MS: Flush-Mount Master Station
RS-191: Option Handset
AN-8050DS: Door Station

[Others]

YC-280: Wall mounting bracket for the AN-8000MS/8010MS/8020MS
YC-290: Wall mounting bracket for the AN-8011MS
YC-241: Back box for the AN-8031MS
YC-251: Wall-mount box for the AN-8031MS
YC-150: Back box for the AN-8050DS
YS-13A: Wall-mount box for the AN-8050DS
E-7000TB: 40-Station Terminal Board
CR-273: Equipment Rack
CR-413: Equipment Rack

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7. INSTALLATION

The exchange can be installed in any of three ways: (1) rack mounting, (2) wall mounting, and (3) desk-top installation.

7.1. Rack Mounting

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

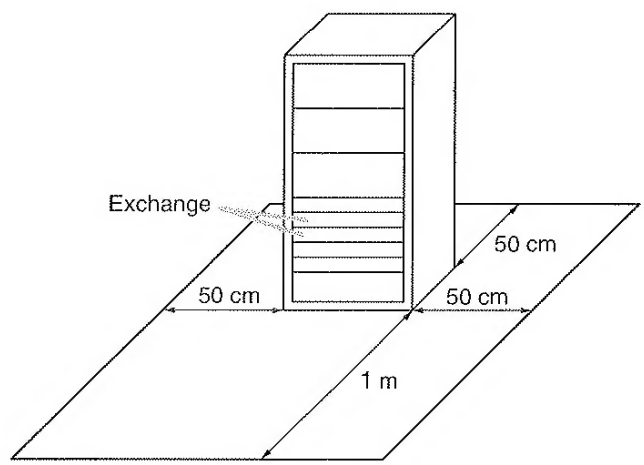
C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

The Exchange can be mounted on the CR-273 or CR-413 or standard EIA 19" Equipment rack.
These racks, when fully equipped with exchanges, can provide the following capacity of stations: 128 stations for one CR-273, 192 stations for one CR-413, and 1,280 stations for seven CR-413s.
For the CR-273 and CR-413 Equipment rack assembly or BU-412 Blower unit installation, read the installation manual supplied with the rack.

Note
When installing the blower units, terminal boards, and exchanges, lay the equipment rack down face-up to do installation work safely. Since the blower unit is installed from the inside of the rack, be sure to install it first, before mounting the other components.



7.1.1. Setting space

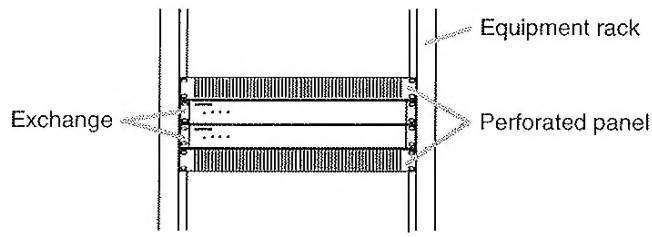
For maintenance works, allow much space between the wall and Equipment rack.

7.1.2. Caution when installing the unit

⚠ CAUTION Do not block the fan exhaust vent. Doing so may cause heat to build up inside the unit and result in fire.

Do not stack up 3 Exchanges or more. If 2 or more Exchanges are mounted in the Equipment rack, be sure to mount the perforated panel of 1 U size (PF-013B) or more above and below every 2 Exchanges.

Using the supplied rack mounting screws, install the terminal board in a location that facilitates wiring and maintenance work, taking into consideration the direction of cable entry into the rack.



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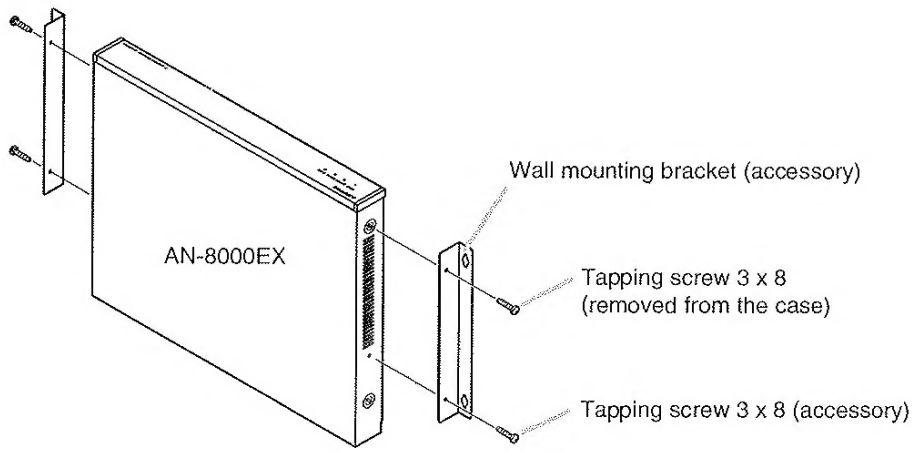
7.3. Wall Mounting

Step 1. Install the supplied wall-mounting bracket to the Exchange using each 2 supplied screws and removed screws from the case.



Step 2. Mount the Exchange on the wall.

Notes

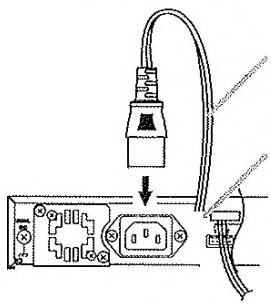
- Use appropriate screws for the construction of wall.
- Wood screws 3.5 x 20 are supplied with the AN-8000EX.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

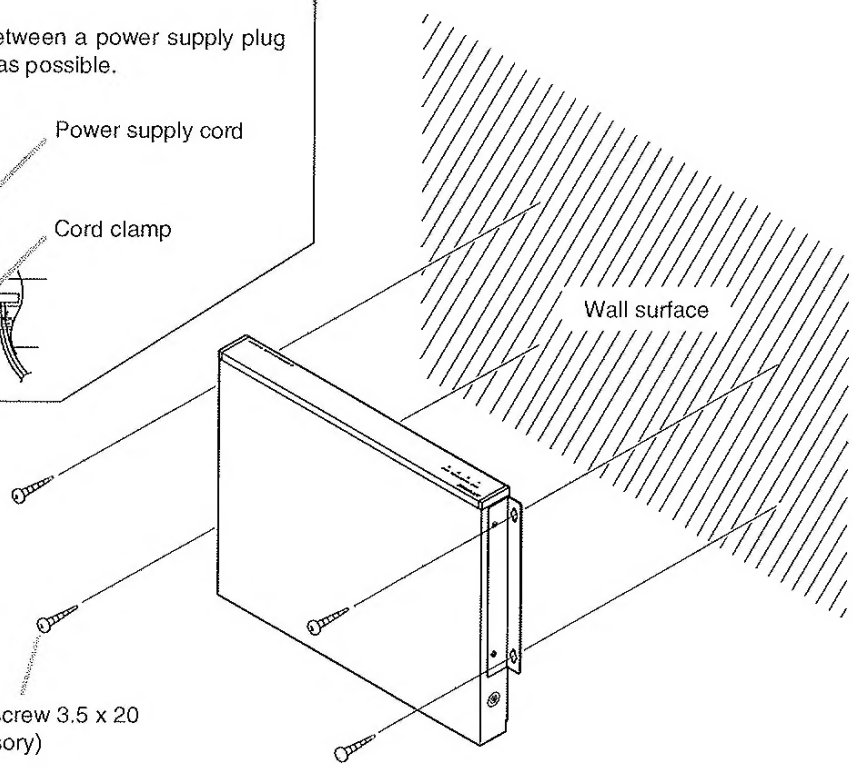
Protect against disconnection (Power supply plug)

Unlock cord clamp and run the power supply cord through it.

Note

Keep the cable length between a power supply plug and cord clamp as short as possible.





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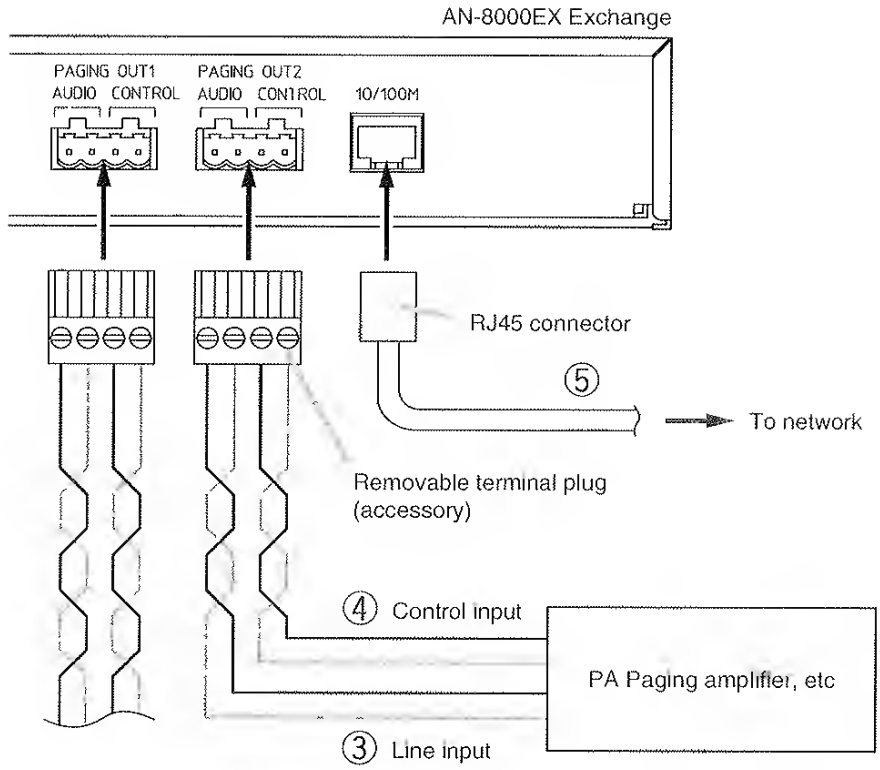

[General description of connection]

For cables, refer to p. 12.

1. Power supply connection

Connect the supplied power supply cord to AC Mains or a UPS (Uninterruptible power supply feeder).

About power supply cord handling

The supplied power supply cord is designed for exclusive use with the AN-8000EX.
Use the supplied power supply cord only with the Exchange.

2. Line terminal connection

The line terminals have no polarity.
(Refer to p. 13, Connector connection.)

3. Paging audio output terminal connection

Paging audio output terminals have no polarity.
(Refer to p. 14, Removable terminal plug connection.)

[Specification of paging audio output]

0 dB*, 600 Ω, balanced

4. Paging contact output terminal connection

Paging contact output terminals have no polarity.
(Refer to p. 14, Removable terminal plug connection.)

[Specification of paging contact output]

No voltage make contact output
Withstand voltage: Max. 24 V DC
Control current: Max. 0.5 A

5. Network connection

Can be connected to a network of 10BASE-T/100BASE-TX in auto-sensing.
Use a UTP category 5 straight-through cable for this connection.

6. Station connection

The connection method differs depending on types of stations.
For details, refer to the instruction manual supplied with each station.

* 0 dB = 1 V

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8.4. Connector Connection

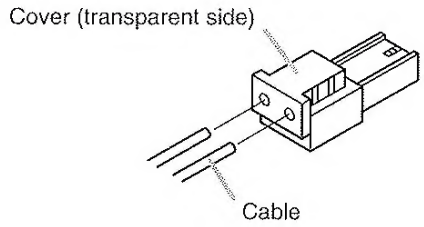
Mini-clamp connectors for line terminals and detachable terminal plugs for paging output terminal are supplied with the AN-8000EX Exchange.
Perform each connector connection as follows.

8.4.1. Mini-clamp connector connection

Connect the mini-clamp connector supplied with the AN-8000EX to a cable using a commercially available tool (pliers).

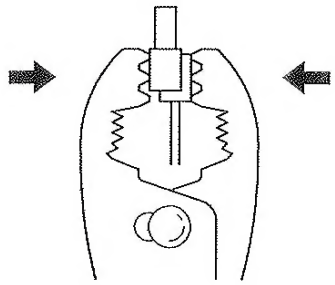
Step 1. Cut off two-cable ends in equal length, and insert them securely to a cover section (transparent side) of the mini-clamp connector.

Note
Insert the cable without stripping the cable jacket.
For cables, refer to p. 12, Type of Cable.

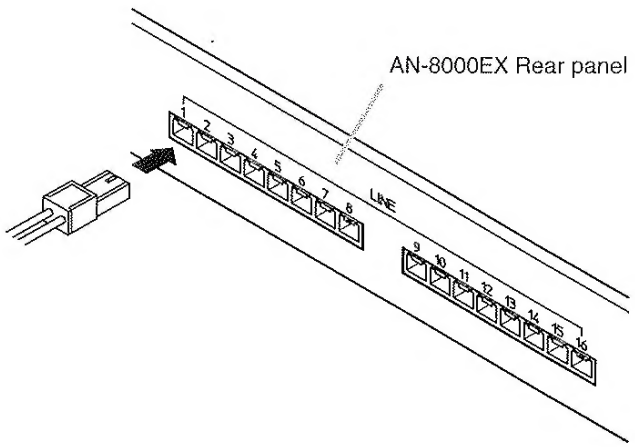


Step 2. With a pair of pliers, lightly pinch the mini-clamp cover and, after ensuring that the cable is securely inserted, firmly squeeze on the cover.

Note
Squeeze on the mini-clamp cover until it is correctly locked.



Step 3. Insert the wired connector (plug) into the exchange's connector (socket) until it locks into place.



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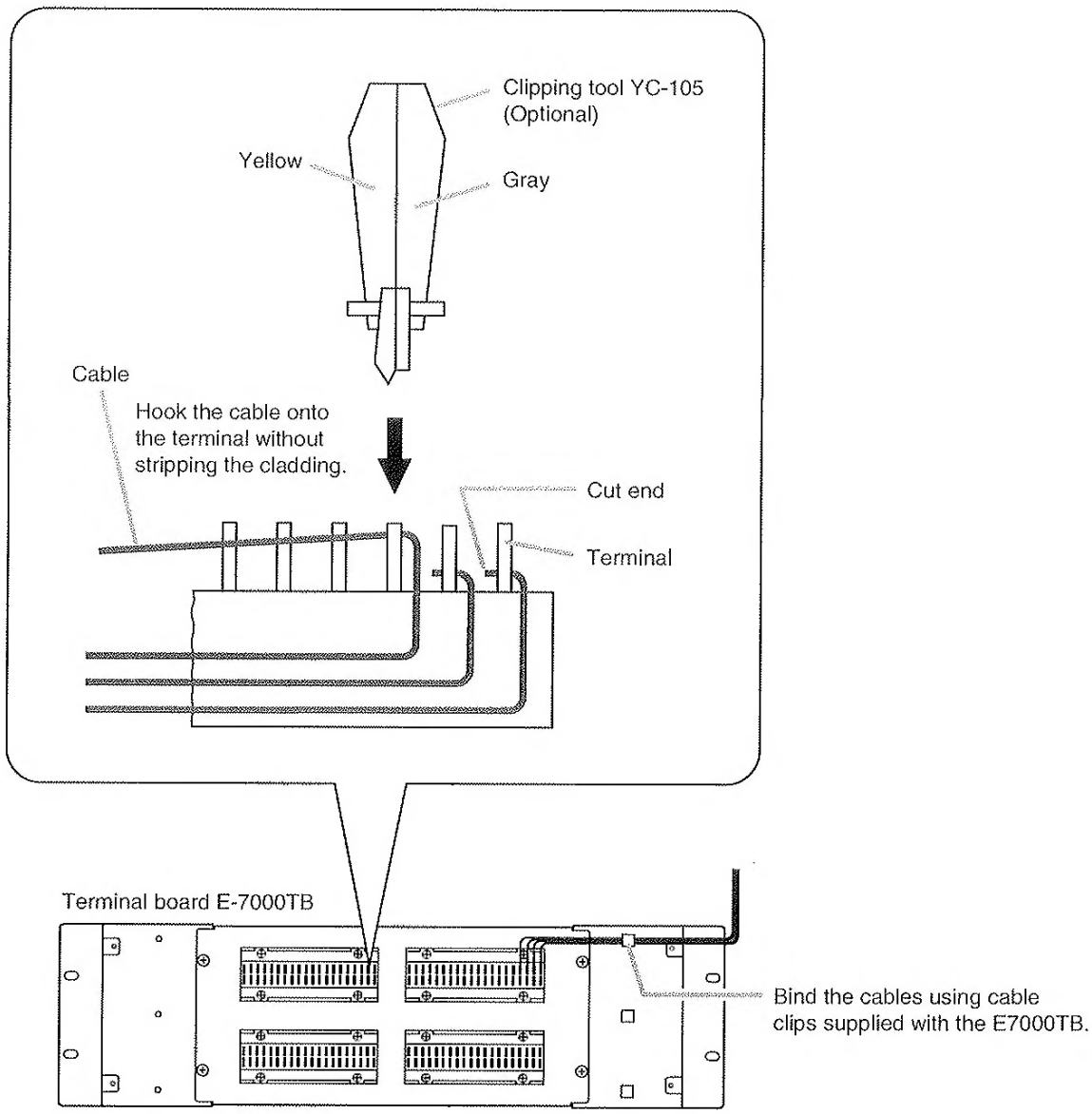
8.5. E-7000TB Terminal Board Wiring

For cable connection to the E-7000TB Terminal Board use the optional YC-105, clipping tool.
Hook the end of the cable onto the terminal and, with the cable end in hand, press the YC-105 Dedicated Tool down onto the terminal from above. Pressing down the YC-105 tool cuts off the excess cable end, securing the connection.

For cables, refer to p. 12, Type of Cable.



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